

WHAT IS CLAIMED IS:

1. An auto tensioner provided between a side of a stationary member and a side of a pulley, and applying a tensile force to a belt, comprising:

5 a plunger corresponding to an upper side slidably insertable into a cylinder corresponding to a lower side via a seal member;

a high pressure oil chamber sectioned by the cylinder and a leading end portion of the plunger formed within the cylinder;

an oil reservoir chamber forming a gas chamber in an upper  
10 portion sectioned in a sealed manner in an outer periphery of the cylinder and the plunger;

a first oil passage communicating the gas chamber with the high pressure oil chamber provided within the plunger;

a second oil passage communicating the high pressure oil  
15 chamber with the oil reservoir chamber provided in the cylinder;

the first oil passage is provided with a pressure side damping force generating means and a first check valve closing during expansion;

a second check valve closing during compression is provided in  
20 the second oil passage; wherein

the first oil passage is provided with a locking means operating in response to an external input signal and acting to close the first check valve.

25 2. An auto tensioner according to claim 1, wherein the pressure side damping force generating means is provided in a leading end side of the plunger in the oil of the high pressure oil chamber.

3. An auto tensioner according to claim 1, wherein the pressure side damping force generating means is provided close to the oil surface of the high pressure oil chamber.

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4. An auto tensioner according to claim 1, wherein the pressure side damping force generating means is formed by an annular gap between an outer periphery in a leading end side of the plunger and an inner periphery of the cylinder.

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5. An auto tensioner according to claim 2, wherein the pressure side damping force generating means is formed by an annular gap between an outer periphery in a leading end side of the plunger and an inner periphery of the cylinder.

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6. An auto tensioner according to claim 1, wherein the first oil passage comprises a vertical hole open to the high pressure oil chamber, and a transverse hole communicated with a middle portion of the vertical hole in a crossing manner and being open to the gas chamber.

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7. An auto tensioner according to claim 6, wherein a valve seat provided with an orifice hole corresponding to the pressure side damping force generating means is press fit to the vertical hole in the leading end portion of the plunger, and the first check valve constituted by a ball valve is provided in a seat surface of the orifice hole.

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8. An auto tensioner according to claim 7, wherein a washer

provided with a notch-shaped communication passage in a part of an outer peripheral edge is held by a caulking means in a leading end surface of the plunger and in an opening portion of the vertical hole in which the valve seat faces the high pressure oil chamber.

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9. An auto tensioner according to claim 1, wherein the lock means comprises an electromagnetic valve operated according to an external input signal.

10 10. An auto tensioner according to claim 1, wherein the second oil passage comprises a hole provided in a valve seat press fit to a lower end portion of the cylinder, and a groove provided in a casing fixed to a lower portion of the cylinder, the second check valve comprises a ball valve which is provided in the seat surface of the valve seat, is  
15 prevented from dropping out toward an outer side by a valve stopper provided around the seat surface of the valve seat, and is movable with respect to the seat surface of the valve seat.

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